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32 ND ALBERTA POULTRY INDUSTRY CONFERENCE PROCEEDINGS

FEBRUARY
21, 22 AND 23, 1983

LETHBRIDGE LODGE HOTEL
LETHBRIDGE, ALBERTA

32nd ANNUAL

ALBERTA POULTRY INDUSTRY CONFERENCE

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I N D E X

32nd ANNUAL ALBERTA POULTRY INDUSTRY CONFERENCE

February 21, 22 and 23, 1983

Lethbridge Lodge Hotel
Lethbridge, Alberta

Chairperson (a.m.). . . . . Floyd Van Slyke

Trying Times in the Poultry Industry . . . Al Caldwell

The Future of the Poultry Industry in Western Canada . . . . . Murray Brown

Reverse - Protein for Pullets--A New Approach . . . . . Dr. S. Leeson

Chairperson (p.m.). . . . . Vic Regier

Trouble Shooting in the Egg Laying House. . Dr. P. Hunton

Possible Disadvantages of Dwarf Broiler Breeders . . . . . Dr. R. Towner

Why Should the "Vedette" Breeder Be Considered . . . . . Larry Long

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Crocodiles, Birds & Broilers: An Ancestral Legacy . . . . . Dr. H. C. Carlson (SPEECH NOT AVAILABLE)

"TRYING TIMES IN THE POULTRY INDUSTRY"

BY

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MANAGER
AGRICULTURAL SERVICES
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FOR

THE ALBERTA POULTRY INDUSTRY CONFERENCE
FEBRUARY 23, 1983
LETHBRIDGE, ALBERTA

I NOTE WITH INTEREST THE THEME OF YOUR CONFERENCE IS "TRYING TIMES IN THE POULTRY INDUSTRY". THESE ARE INDEED TRYING TIMES IN ALL INDUSTRIES AND I GUESS THERE IS NO REASON THAT THE POULTRY INDUSTRY SHOULD BE ANY EXCEPTION. HOWEVER, I GUESS WE IN THE AGRICULTURAL INDUSTRY, ARE MAYBE BETTER EQUIPPED TO DEAL WITH TRYING TIMES THAN MANY OTHER SEGMENTS. AFTER ALL, FARMERS HAVE ALWAYS HAD TO DEAL WITH THE VAGARIES OF MARKETS AND WEATHER, AND HAVE CONST A NTLY HAD TO ADAPT TO TECHNOLOGICAL CHANGE WHICH HAS CAUSED THE PRODUCTIVITY OF AGRICULTURE TO INCREASE SO DRAMATICALLY OVER THE PAST 20 YEARS. IT SEEMS TO ME THAT THE OIL INDUSTRY IS HAVING SOME DIFFICULTY DEALING WITH THE FACT THAT OIL PRICES CAN GO BOTH WAYS. IT'S UNFORTUNATE THAT THERE WEREN'T A COUPLE OF FARMERS ON THE NEGOTIATING BOARD FOR THE NATIONAL ENERGY PROGRAMME BECAUSE YOU'VE KNOWN THAT PRICES CAN GO BOTH WAYS FOR YEARS.

MY PRESENTATION TODAY IS ENTITLED "HOW YOUR BANKER SEES YOU". NOW WE HAVE HEARD QUITE A BIT LATELY, IN THE PRESS PRIMARILY, ABOUT HOW YOU SEE US. WELL, HOW DO YOU SEE US? CHANCES ARE MANY OF US SEE YOUR BANKER AS:

1) SOMEONE WHO WORKS FROM 10 TO 3 BUT IS NEVER IN WHEN YOU WANT TO SEE HIM,

2) SOMEONE WHO IN ALL THE YEARS THAT YOU'VE DEALT WITH HIM HAS NEVER VISITED YOUR FARM,

3) SOMEONE WHO ALWAYS WANTS MORE SECURITY THAN YOU THINK HE NEEDS,

4) SOMEONE WHO THRIVES ON PAPER, MOST OF WHICH HE ALLOWS YOU TO READ UPSIDE DOWN,

5) SOMEONE WHO WOULD NEVER LEND YOU ENOUGH MONEY A FEW YEARS AGO, BUT NOW THAT YOU'RE HAVING SOME REAL FINANCIAL PROBLEMS - SOMEONE WHO LENT YOU WAY TOO MUCH IN THE FIRST PLACE,

6) AS SOMEONE THAT'S TAKEN YOU TWO LONG YEARS TO TRAIN AND NOW THAT HE FINALLY UNDERSTANDS YOUR OPERATION, IS BEING TRANSFERRED.

WHILE THESE WERE INTENDED TO BE SOMEWHAT HUMOROUS ILLUSTRATIONS OF YOUR PERCEPTIONS OF YOUR BANKER, UNFORTUNATELY THEY ARE VERY COMMON COMPLAINTS WHICH FARMERS HAVE ABOUT THE BANKING RELATIONSHIP WHICH THEY HAVE. NOW I'D LIKE TO BE ABLE TO SAY THAT IF YOU DEALT WITH THE TORONTO-DOMINION BANK NONE OF THESE WOULD BE TRUE, HOWEVER, THAT MIGHT BE A SLIGHT EXAGGERATION. WE ARE, HOWEVER, TRYING VERY HARD TO TRY AND OVERCOME SOME OF THESE COMMON COMPLAINTS WHICH MANY OF YOU MAY FEEL YOU HAVE IN YOUR BANKING RELATIONSHIP.

WE ENCOURAGE YOU TO MAKE APPOINTMENTS SO THAT WE CAN DEAL WITH YOUR REQUESTS IN A BUSINESS-LIKE FASHION WITH A MINIMUM OF WAITING.

WE ENCOURAGE OUR MANAGERS TO VISIT YOUR FARMS SO THEY CAN BETTER UNDERSTAND YOUR LONG TERMS GOALS AND OBJECTIVES, AND SEE FIRST HAND YOUR ACCOMPLISHMENTS. WE STILL REQUIRE SECUR.TY BUT WE TRY NOT TO BE EXCESSIVE AND ARE MORE CONCERNED WITH WHETHER THE PLAN WILL WORK THAN WE ARE WITH TYING UP ALL YOUR SECURITY. WE WANT YOU TO UNDERSTAND WHAT YOUR BALANCE SHEET, YOUR CASH FLOW STATEMENT AND AND YOUR INCOME STATEMENT MEAN WHEN YOU READ THEM RIGHT SIDE UP SO THAT YOU CAN MAKE THE TOUGH MANAGEMENT DECISIONS YOU'RE REQUIRED TO MAKE. WE TRY TO DEAL WITH YOUR LOAN REQUESTS FAIRLY SO THAT WE CAN'T BE ACCUSED OF LENDING TOO LITTLE OR TOO MUCH. I GUESS EVERYONE WHO EXPERIENCES FINANCIAL DIFFICULTIES WISHES THEY HADN'T BORROWED THE MONEY IN THE FIRST PLACE AND IT'S OFTEN EASIER TO FIND SOMEBODY TO BLAME RATHER THAN TO ACCEPT RESPONSIBILITY YOURSELF.

FINALLY, WE DON'T MOVE OUR MANAGERS AS MUCH TODAY AS WE ONCE DID. WE RECOGNIZE THE NEED FOR CONTINUITY AND IN MANY OF OUR LARGER BRANCHES WE ARE DEVELOPING AGRICULTURAL SPECIALIZATIONS WITHIN THOSE BRANCHES SO THAT OUR LENDING OFFICERS CAN DEAL MORE CAPABLY WITH OUR AGRICULTURAL CLIENTS.

HOW DOES YOUR LENDER SEE YOU? CHANCES ARE, DEPENDING ON YOUR RELATIONSHIP WITH YOUR BANKERS, HE MAY SEE YOU AS:

1) A RISK TAKER; NEVER AFRAID TO GO FOR THE LONG SHOT.

2) SOMEONE WHO LOVES THE SUN AND THE SOIL, WHO LOVES DRIVING TRACTOR AND FEEDING THE COWS, BUT WHO HATES PAPER WORK WITH A PASSION.

3) AS SOMEONE WHOSE RECORD KEEPING AND FILING SYSTEM MAY VARY FROM A NAIL ON THE TRACTOR FENDER TO A SOPHISTICATED MINI COMPUTER, BUT MORE OFTEN THAN NOT, SOMEONE WHOSE ENTIRE RECORD KEEPING SYSTEM IS STORED IN HIS HEAD.

4) AS SOMEONE WHO POURS THE PAD FOR THAT NEW POULTRY BARN THEN COMES INTO THE BANK TO ARRANGE THE FINANCING AND REQUIRES AN ANSWER YESTERDAY.

5) AS THE ETERNAL OPTIMIST WHOSE TWO REALLY GOOD YEARS WERE 1947 AND NEXT YEAR.

6) AS SOMEONE WHO OFTEN DROPS IN UNEXPECTEDLY WITHOUT AN APPOINTMENT AND DISRUPTS AN OTHERWISE REASONABLY WELL PLANNED DAY.

WHILE THE POINTS I OUTLINED EARLIER ABOUT HOW YOU SEE YOUR BANKER ARE OF REAL CONCERN, THE PERCEPTIONS OF YOU BY YOUR BANKER SHOULD ALSO BE OF CONCERN AND THEY ARE NO LESS REAL.

BECAUSE YOU DEAL WITH RISK EVERY DAY IN YOUR BUSINESS, IT'S OFTEN EASY TO BECOME A RISK TAKER. FARMING IS BY DEFINITION A BUSINESS WHICH INVOLVES RISK. THE KEY, HOWEVER, TO BEING A SUCCESSFUL FARM MANAGER IS TO ADEQUATELY MANAGE THE RISK TO A LEVEL WHICH IS ACCEPTABLE BASED ON YOUR FINANCIAL SITUATION.

I THINK IT'S TRUE GENERALLY THAT MOST FARMERS DON'T ENJOY PAPER WORK, AND CAN OFTEN COME UP WITH SOME PRETTY GOOD REASONS WHY THEY SHOULDN'T DO ANY. HOWEVER, IN TODAY'S AGRICULTURE, THE AMOUNTS OF BORROWED CAPITAL THAT YOU REQUIRE IN YOUR BUSINESS DICTATES THAT YOU BECOME BETTER FINANCIAL MANAGERS AND BETTER FINANCIAL MANAGEMENT IS A FUNCTION OF GOOD RECORD KEEPING. PROPER FINANCIAL RECORDS AND A GOOD UNDERSTANDING OF YOUR FINANCIAL POSITION AND AN ABILITY TO MANAGE YOUR CASH POSITION AND ADEQUATELY PLAN YOUR FINANCES ARE FUNDAMENTAL TO A GOOD BANKING RELATIONSHIP. BANKERS CAN NO LONGER BE EXPECTED TO LEND THE AMOUNTS OF MONEY REQUIRED WITHOUT MORE SOPHISTICATION IN TERMS OF FINANCIAL ANALYSIS AND RECORD KEEPING.

IT'S A FACT OF LIFE THAT YOUR LOCAL BRANCH MANAGER HAS A LENDING LIMIT AND THAT MOST OF THE LOANS WHICH YOU ARE REQUESTING OF HIM HAVE TO BE DEALT WITH BY SEVERAL LEVELS OF BANK'S CREDIT MANAGEMENT. IT'S OBVIOUSLY UNFAIR, THEREFORE, NOT TO PROVIDE YOUR BANK WITH ADEQUATE LEAD TIME SO THAT HE CAN PROPERLY ASSESS YOUR LOAN REQUESTS. YOU EXPECT YOUR BRANCH MANAGER TO BE ABLE TO COUNSEL YOU ON YOUR FINANCIAL DECISIONS AND THIS CAN ONLY BE DONE IF PROPER TIME IS ALLOWED FOR ADEQUATE ANALYSIS.

FARMERS ARE OPTIMISTIS. THEY HAVE TO BE, AND I GUESS THAT'S WHAT MAKES THEM SUCH A PLEASURE TO DEAL WITH. THEY TEND TO LOOK ON THE BRIGHT SIDE AND EXPECT THINGS TO BE BETTER NEXT YEAR THAN THEY WERE LAST. HOWEVER, OVER OPTIMISM CAN BE CAUSE FOR CONCERN. FAI L URE TO MAKE YOUR PLANS WORK YEAR OVER YEAR, BUT TO CONTINUE TO PROVIDE OPTIMISTIC PROJECTIONS ON HOW NEXT YEAR WILL BE DIFFERENT CAN ULTIMATELY CAUSE YOUR BANKER TO LOSE CONFIDENCE. MAKE YOUR PLANS AND STICK TO THEM. TRY TO MAKE THEM WORK AND BE ABLE TO EXPLAIN ANY VARIANCES THAT MAY OCCUR.

WE RECOGNIZE THAT FARMERS ARE UNDER TIME PRESSURE AND OFTEN YOU DRIVE LONG DISTANCES AND EXPECT YOUR BANKER TO HAVE TIME TO DEAL WITH YOU WHEN YOU MAKE THOSE TRIPS. HOWEVER, WHERE AT ALL POSSIBLE, TRY TO PHONE AHEAD AND ARRANGE AN APPOINTMENT. THAT WAY YOUR BANKER WILL BE ABLE TO DEAL WITH YOU PROMPTLY, AND BE ABLE TO SAVE YOU UNNECESSARY TRIPS AND YOU'LL SPEND FAR LESS TIME WAITING IN THE FRONT OFFICES.

ONE OF THE THINGS WE AS BANKERS SEEM TO SPEND A LOT OF TIME DEALING WITH THESE DAYS IS FINANCIAL PROBLEMS. I WOULD SAY, HOWEVER, THAT AGRICULTURE HAS GENERALLY WEATHERED THE ECONOMIC STORM BETTER THAN MOST BUSINESSES OF EQUIVALENT SIZE. FARM CREDIT CORPORATION UNDERTOOK A STUDY ABOUT TWO YEARS AGO WHICH SHOWED THAT THE AVERAGE EQUITY OF A CANADIAN FARMER WAS IN THE ORDER OF 85%. THIS CERTAINLY PROVIDES THE NECESSARY BACKUP TO WITHSTAND THE PERIODIC DOWN CYCLES WHICH WE HAVE EXPERIENCED AND WILL NO DOUBT EXPERIENCE IN THE FUTURE. I WOULD, HOWEVER, LIKE TO SHARE BRIEFLY WITH YOU SOME OF THE THINGS WHICH WE AS BANKERS LOOK FOR WHEN WE DEAL WITH YOUR ACCOUNT WHICH MAY SIGNAL A POTENTIAL PROBLEM. HOPEFULLY, THIS LIST WHICH IS BY NO MEANS EXHAUSTIVE, WILL HELP YOU IN SPOTTING FINANCIAL PROBLEMS BEFORE THEY BECOME TOO SERIOUS IN YOUR OWN OPERATION.

1) <u>A TREND TOWARDS SPECULATIVE TENDENCIES - THE DESIRE OR INSISTENCE OF A CLIENT TO TAKE ON BUSINESS GAMBLES OR RISKS.</u>

A DESIRE TO TAKE ON MORE THAN WHAT'S CONSIDERED TO BE AN ACCEPTABLE RISK M A Y B E AN INDICATION THAT YOUR BUSINESS IS HAVING SOME FINANCIAL DIFFICULTIES, OR THAT IT MAY HAVE FINANCIAL

DIFFICULTIES IF THE RISKS OR GAMBLES DON'T PAY OFF. A COMMON EXAMPLE OF THIS WOULD BE A CUSTOMER WHO TAKES ON A HEDGING PROGRAMME AND ULTIMATELY SHIFTS HIS TRADING PATTERNS TO SPECULATION. AS I MENTIONED EARLIER, FARMING IS BY DEFINITION A BUSINESS WHICH INVOLVES RISK AND ONE MUST BE VERY CAREFUL TO MANAGE THAT RISK TO ACCEPTABLE LEVELS.

2) <u>CHANGES IN THE TIMING OF SEASONAL LOAN REQUESTS OR SHARP JUMPS IN THE SIZE OF LOAN REQUESTS</u>.

NORMALLY, GRAIN FARMERS SIT DOWN AND DESIGN THEIR OPERATING LOAN REQUIREMENTS IN THE SPRING. FEED LOT OPERATORS MAY DESIGN AND NEGOTIATE THEIR LINES OF CREDIT IN THE FALL. WHEN THE TIMING OF THESE LOAN REQUESTS DOESN'T OCCUR AS PER NORMAL IT MAY BE A SIGNAL TO THE BANKER THAT THE BUSINESS IS UNDERGOING SOME KIND OF FINANCIAL PROBLEMS. FOR EXAMPLE, WITH THE RELATIVELY SLUGGISH MOVEMENT OF GRAIN THIS YEAR WE HAVE EXPERIENCED A NUMBER OF FARMERS HAVING TO INCREASE AND NEGOTIATE THEIR LINES OF OPERATING CREDIT BEFORE THE NORMAL TIME, WHICH IS SPRING PLANTING. NOW, THIS, DEPENDING UPON THE INDIVIDUAL'S FINANCIAL SITUATION IS NOT NECESSARILY A SERIOUS PROBLEM BUT IT DOES INDICATE THAT THERE ARE CASH FLOW SHORTAGES AND WE AS BANKERS WANT TO BE AWARE OF THEM SO THAT WE CAN TAKE ANY CORRECTIVE ACTION WHICH IS NECESSARY.

ANOTHER REASON THAT THERE MAY BE AN INCREASED REQUIREMENT FOR SHORT TERM CREDIT MAY BE MISUSE OF THAT [illegible] IN TERMS OF CAPITAL EXPENDITURES. OPERATING CREDIT IS DESIGNED FOR JUST THAT -

OPERATING, AND WASN'T DESIGNED TO BUY NEW PICK-UP TRUCKS, TRACTORS ETC. AN INCREASE IN REQUIREMENTS FOR OPERATING CREDIT MAY INDICATE TO THE LENDER THAT THE OPERATOR IS NOT EXERCISING PROPER CASH MANAGEMENT AND MAY BE IN OR HEADED FOR FINANCIAL DIFFICULTIES.

3) A SECOND OR THIRD REQUIREMENT FOR DEBT CONSOLIDATION.

WHILE A SECOND OR THIRD CONSOLIDATION MAY SOMETIMES RESULT FROM AN EXTENDED PERIOD OF BAD MARKETS OR BAD LUCK, IT'S OFTEN AN INDICATOR OF MORE SERIOUS PROBLEMS. IT MAY BE THAT THE PRESENT SCALE OR MIX OF THE OPERATION IS NOT VIABLE AND THAT A TOTAL REALIGNMENT AND RE-DIRECTION OF RESOURCES MAY BE REQUIRED. IT MAY INDICATE IMPROPER USE OF FUNDS, SUCH AS EXTENSIVE PURCHASES OF NON-PRODUCTIVE ASSETS, OR THE EXPENDITURE OF SHORT TERM CAPITAL ON LONG TERM FIXED ASSETS, AS WE TALKED ABOUT BEFORE. THESE FACTORS ARE ALMOST ALWAYS RELATED TO MANAGEMENT AND THE ADVICE OF SPECIALISTS, SUCH AS AGRICULTURAL CONSULTANTS, DEPARTMENT OF AGRICULTURE SPECIALISTS, ETC., SHOULD BE SOUGHT IN ORDER TO IDENTIFY THE PROBLEM. THE CONTINUANCE OF CONSOLIDATION FINANCING WITHOUT FULLY RECOGNIZING THE PROBLEM AND TAKING STEPS TO CORRECT IT MAY HAVE WORKED IN TIMES OF STEADY UPWARDS INFLATION, BUT IT STOPS VERY QUICKLY IN TIMES OF ZERO OR NEGATIVE ASSET GROWTH.

4) COMMITMENTS TO PROJECTS PROMISING EXCEPTIONALLY HIGH OR UNUSUAL PROFIT POTENTIAL

DEPENDING ON YOUR FINANCIAL RISK, MOST BANKERS WOULD PROBABLY ENCOURAGE YOU TO DO SOME EXPERIMENTING ON YOUR FARM. HOWEVER, TO COMMIT THE MAJORITY OF YOUR RESOURCES TO AN UNTRIED VENTURE PROMISING HIGH RETURNS IS PROBABLY NOT TOO ADVISABLE. IT MAY INDICATE THAT YOU ALREADY HAVE SOME TROUBLE AND ARE LOOKING FOR A GET RICH QUICK BAILOUT OR IT MAY AGAIN INDICATE THAT YOU WILL HAVE FINANCIAL TROUBLE SHOULD THE VENTURE FAIL. THIS RELATES DIRECTLY TO YOUR ATTITUDE TOWARDS RISK, AND THE FACT THAT RISK MUST BE KEPT AT ACCEPTABLE LEVELS.

5) A DELAY IN REACTING TO DECLINING MARKETS OR ECONOMIC CONDITIONS.

AS LITTLE AS 18 MONTHS AGO INFLATION AND ITS EXPECTED CONTINUANCE WAS A MAJOR INFLUENCING FACTOR IN MANY FARM BUSINESS DECISIONS. "I REALIZE THE LAND WON'T PAY FOR ITSELF ON A PRODUCTIVE BASIS BUT THE AVERAGE APPRECIATION IN LAND PRICES IS HIGHER THAN THE INTEREST RATE AND THEREFORE IT'S A GOOD INVESTMENT". OR "I'VE GOT TO BUY THIS TRACTOR TODAY OR TOMORROW IT WILL COST 30% MORE". THESE WERE COMMON STATEMENTS BY FARM CUSTOMERS AND AT THE TIME THEY MADE GOOD ECONOMIC SENSE. HOWEVER, WITH ESCALATING INTEREST RATES AND THE FLAT OR DECLINING ASSET VALUES COMBINED WITH THE DIFFICULTY OF MOVING FARM ASSETS, AT ANY PRICE, AN ABRUPT CHANGE IN DECISION MAKING HAS OCCURRED. FARMERS WHO FAIL TO RECOGNIZE THAT THESE CHANGES HAVE OCCURRED HAVE BEEN CAUGHT IN A FINANCIAL SQUEEZE AND OBVIOUSLY BUSINESSMEN WHO HAVEN'T ADJUSTED THEIR MANAGEMENT TO THESE CHANGED CONDITIONS ARE HEADED FOR TROUBLE.

6) APPEARANCE OF OTHER LENDERS IN THE FINANCIAL PICTURE.

OF CONCERN TO MOST BANKERS IS THE SUDDEN APPEARANCE OF OTHER FINANCIAL INSTITUTIONS OR TRADE CREDITORS IN THE FINANCIAL SITUATION OR SUDDEN INCREASES IN BORROWINGS FROM OUTSIDE SOURCES WHICH MAY HAVE BEEN THERE BEFORE. OF PARTICULAR CONCERN IS THAT BORROWINGS OCCURRING ELSEWHERE MAY RESULT IN THE DILUTION OF THE BANK'S SECURITY WHEN ASSETS WHICH WERE ENCUMBERED TO HIM ARE PLEDGED TO ANOTHER LENDER. TOO MANY LENDERS CAN OFTEN RESULT IN AN OVER-EXTENSION OF CREDIT SINCE WE ALL TEND TO CONCERN OURSELVES MORE WITH OUR OWN EXPOSURE RATHER THAN WITH THE TOTAL CREDIT CONSUMPTION OF THE FARM BUSINESS. WHILE FARMERS ARE OFTEN RELUCTANT TO "PUT ALL THEIR EGGS IN ONE BASKET" THE LENDER CAN PROVIDE BETTER FINANCIAL ADVICE IF HE UNDERSTANDS CLEARLY THE ENTIRE BORROWING REQUIREMENTS OF THE BUSINESS.

7) GROWTH PATTERNS WHICH STRAIN THE CAPACITY OF THE OWNER TO MANAGE AND CONTROL.

DIVERSIFICATION IS A MEANS OF REDUCING RISK. OFTEN DIVERSIFICATION OF A FARM BUSINESS IS BASED ON COMPLIMENTARY OPERATIONS. HOWEVER, A TREND TO OVER-DIFERSIFICATION CAN RESULT IN MANAGEMENT DILITION WHICH CAN CAUSE AN INCREASE IN RISK DUE TO THE INABILITY OF THE OPERATOR TO MANAGE OR CONTROL THE ENTIRE OPERATION. OVER DIVERSIFICATION, PARTICULARLY INTO NON-COMPLIMENTARY AREAS, OR INTO OPERATIONS WHERE THERE IS NO PRIOR MANAGEMENT EXPERIENCE CAN OFTEN LEAD TO PROBLEMS.

8) OVER INFLATION OF ASSET VALUES OR OVER OPTIMISM IN PROJECTING CASH FLOW WHEN PROVIDING FINANCIAL DATA

THIS SITUATION MAY RELATE TO POINT 5 AND INDICATES THAT THE CLIENT MAY NOT HAVE ADJUSTED TO A CHANGE IN ECONOMIC CONDITIONS. ALTERNATIVELY, IT MAY INDICATE THAT HE RECOGNIZES THAT HE IS IN FINANCIAL TROUBLE BUT HOPES THAT BY PAINTING A SOMEWHAT BRIGHTER PICTURE THAN WHAT ACTUALLY EXISTS, HE CAN BUY ENOUGH TIME TO WORK HIMSELF OUT OF IT. A FRIEND OF MINE WHO IS A COMMODITY BROKER SAYS THERE ARE FOUR STAGES MOST NOVICE COMMODITY TRADERS GO THROUGH ON THEIR FIRST FEW TRADES:

HOPE - IS WHEN YOU INITIATE YOUR TRADE AND HOPE YOU'RE ON THE RIGHT SIDE OF THE MARKET.

GREED - IS WHEN YOU FIND OUT YOU'RE ON THE RIGHT SIDE BUT IGNORE THE PROFIT TAKING SIGNALS WHICH TELL YOU WHEN TO CASH OUT.

WISHFUL THINKING - OCCURS WHEN THE MARKET STARTS TO MOVE AGAINST YOU AND YOU WISH YOU HAD SOLD AT THE HIGH BUT YOU JUST KNOW THAT IT WILL TURN SOON AND GIVE YOU ANOTHER CHANCE.

FEAR - OCCURS WHEN YOUR PROFIT POSITION TURNS TO LOSS AND YOU IGNORE THE SIGNALS OF THE TURNAROUND AND CASH YOUR LOSS.

AN OVER-INFLATION OF ASSETS OR OPTIMISTIC OUTLOOK IN A PESSIMISTIC ECONOMY IS LIKELY AN INDICATION OF EITHER WISHFUL THINKING OR FEAR, AND BOTH ARE SIGNALS OF FINANCIAL TROUBLE.

9) CONDITIONS OF CREDIT SUCH AS MARGINS NOT BEING MET.

GENERALLY WHEN A BANKER PROVIDES YOU WITH AN OPERATING LOAN HE WILL ASK FOR SPECIFIC CONDITIONS TO BE MET CONCERNING THAT OPERATING LOAN. FOR EXAMPLE, HE MAY ASK FOR 150% COVERAGE, WHICH MEANS SIMPLY THAT FOR EACH $1.00 YOU BORROW FROM THE BANK YOU SHOULD HAVE $1.50 WORTH OF SECTION 178 SECURITY ON HAND. THE REASON WE SET MARGINS IS PRIMARILY DUE TO PRICE RISK - THE FACT THAT THE PRICE OF YOUR COMMODITY FLUCTUATES AND IF WE LEND ON TODAY'S CURRENT MARKET VALUE WE CAN FIND WE HAVE INADEQUATE SECURITY TOMORROW UNLESS WE HAVE A SPECIFIED MARGIN. REDUCED MARGINS AS A RESULT OF PRICE DECLINES ARE USUALLY AN INDICATOR OF REDUCED PROFITABILITY AND OFTEN A RESTRUCTURING OF FINANCING MAY BE NECESSARY. A REDUCTION IN MARGINS MAY ALSO BE AN INDICATOR OF POOR CASH MANAGEMENT AS SALES REVENUES ARE USED TO FINANCE FIXED ASSETS OR OPERATING CREDIT IS EXPENDED ON TERM ACQUISITIONS. UNLESS THE MARGIN SHORTFALL IS SEASONAL IN NATURE IT IS USUALLY AN INDICATOR OF FORTHCOMING DIFFICULTIES.

HOPEFULLY, THIS SHORT LIST OF SOME OF THE THINGS THAT YOUR BANKER LOOKS FOR WHEN HE ASSESSES YOUR ACCOUNT WILL HELP YOU IN BETTER UNDERSTANDING THE REASON THAT HE REQUIRES FINANCIAL INFORMATION AND WILL DEMONSTRATE THE IMPORTANCE OF EXERCISING SOUND FINANCIAL MANAGEMENT.

IN CLOSING I WOULD JUST LIKE TO ADD ONE MORE PERCEPTION THAT YOUR BANKER PROBABLY HAS OF YOU, HIS FARM CUSTOMER. HE SEES YOU AS AN HONEST, HARD WORKING INDIVIDUAL WITH INTEGRITY, WHO HAS A SINCERE DESIRE TO FULFILL HIS OBLIGATIONS, BOTH FINANCIALLY AND PERSONALLY. THERE HAVE, HOWEVER, IN RECENT MONTHS, BEEN SOME ISOLATED SITUATIONS WHICH UNFORTAUNTELY HAVE RAISED SOME QUESTIONS CONCERNING THE INTEGRITY OF THE FARM COMMUNITY AS A WHOLE. THIS IS EXTREMELY UNFORTUNATE SINCE BECAUSE OF THE ACTIONS OF A FEW, ALL FARMERS MAY TEND TO BE COLORED WITH THE SAME BRUSH.

A BASIC FUNDAMENTAL OF ANY LENDING RELATIONSHIP IS TRUST. WE IN THE BANKING COMMUNITY PARTICULARLY TRUST OUR FARM CUSTOMERS AND WILL CONTINUE TO TRUST THEM AND EXPECT THEM TO EXERCISE INTEGRITY EVEN DURING TIMES OF CRISIS. THESE ARE INDEED TRYING TIMES, HOWEVER, IT IS OUR SINCERE INTENT TO WORK TOGETHER WITH YOU SO THAT WE BOTH MAY AGAIN ENJOY THE GOOD TIMES WHICH AGRICULTURE DO DOUBT WILL EXPERIENCE IN THE NEAR FUTURE.

The Future of the Turkey Industry in Western Canada

By
Murray Brown

The topic appears to be relatively restricted. However, since it was assigned and noting the time alloted, I assume one of two things: Either I am extended the privelege of digressing or someone should have the refreshments ready to go.

A speaker later today has an option of expounding upon a ligators, ostriches, barbecues and ancestral wills. Although I expect to move from the topic at times, an attempt will be made not to vary to the extremes the above speaker could and will possibly do.

If coffee is ready then I can sum up the future of the Turkey Industry in Western Canada in two words: Good and bad. The grey area between these two allow me some flexiblility. It also means that if refreshments are ready, they will probably be cold at the end of this discertation. To clear the air and also exonerate anyone here, any statements and thoughts are my own. (In other words, no ghost writer). Realizing my peers may take a jaundiced view of some remarks and recognizing some segments of our industry will completely disagree, I continue.

It could be argued that an assessment of the future does not necessarily require a diatribe of the past. Statistics (I haven't got them) indicate that the majority of primary turkey production was in Western Canada. Those years, just prior to the recognition by other areas that production of this commodity could and would add to "their net return." The phrase "their net return" may lead you to believe I could be somewhat biased in my thinking.

Biased or not it became clear that production, without due regard to consumption would become ruinous to all. Hence, the introduction of marketing boards.

Marketing boards and their necessary legislative powers were born of necessity. They enabled Western producers to somewhat protect their legacy. (That word keeps cropping up). I don't wish to give the impression that Eastern "ogres" were alone responsible. The advent of improved technology in poultry production induced a trend to overproduction. Overproduction was apparent in the "west" as well as the "east," resulting in the all to familiar red ink.

A saying expresses "Knowledge was founded in the east and spread to the west." The ability of western producers to recognize a problem and produce a solution leads me to coin a different phrase. "Common sense was produced in the west and hopefully will be adopted in the east."

Total production within Canada now exceeding national consumption it was expedient to control or allocate production on a national level.

Hence the introduction of National Agencies. Marketing boards co-operated and agreed to so manage marketing that national consumption should reduce inventories to a manageable level. To accomplish this task legislation was necessary.

Here, I digress. History will show that enabling legislation was achieved above all through the efforts of one man. If he was present he may argue such a statement. I believe that without the efforts of M. E. (Jerry Pringle), this industry and associated sister industries would not be in their present position. They could not advocate and administer policies affecting them, and their well being as effectively as at the present time. If we do not choose to utilize these accomplishments, it is sad. If we choose to be manipulated and not express and demand our rights and privileges as members of this society, it is sad. If we as contributors to the real Gross National Product continue to oblige and condone policies and decisions of bureaucracy--it is sad. More later, but Mr. Pringle "Thank you" for helping me achieve my right. If I choose not to use it don't you apologize. Agencies were formed with considerable difficulty. It is amazing at even a national level how human nature becomes apparent. Provincial shares or allocations were determined and distributed. This required considerable dialogue but eventually a concensus was reached. The unselfishness of some provinces was instrumental in these attainments.

This concludes the brief history, which I do hope was not too boring. Some members of the audience I'm sure have already ascertained the direction I will take.

All producers in each province were ecstatic that here was a vehicle by which we could contribute to our own welfare. We really believed Utopia could be obtained. Let us observe what has taken place.

For several years the producers practiced a democratic method to adequately apply rules to obtain fair and just returns. Alas and woe!!! Someone who pretends to be the know all and savior of all producers arrives on the scene. The arrival was welcomed.

It appears the onerous duties led to dramatic and disastrous (to the producer) appointments to allay these duties.

Legislation which could be utilized to the advantage of a particular group should be monitored. No one should take acception to that statement. How much monitoring is required? I leave it to you.

At the present time three agencies are operating under the authority and jurisdiction of the National Farm Products Marketing Act. All three are known to all. These represent turkey producers, egg producers and broiler producers. Each provincial board is represented by a director. The duties of directors are to carry the requests from the provincial producers to the collective body of directors and further to ensure that consumers don't get it in the ear. Arithmetic suggests that three Agencies composed of a director from each province should be a sum total of 24-25. All provinces are not [illegible] agencies.

Recent figures indicate the Federal government employees now number 28. That is more than one watchdog for every producer representative. In addition this same body in 1981-82 had an authorized budget of 1.3 million dollars. A member of parliament many years ago suggested "What's a Million Dollars". In this case it represents $52,000 for every director of Agencies in Canada. An example of bureaucracy running wild? You bet it is! Public hearings should not be confined to imaginary misuse by producer groups but actual misuse by bureaucratic groups.

I wax further. In 1981-82, egg producers in Canada by a democratic procedure derived a method to distribute production equitably. Cadence should be given to directors involved, as those things "chiselled in granite" are indeed difficult to alter. Although common sense appeared to prevail, the decision was not to be. A small group prevailed upon a person more astute in the complexities of poultry production than the collective number of people assembled in this room. Advice was provided. Advice, from people who have no more invested that protecting their non-productive employment. Oh, the shame! Oh, the guilt of it all! No one should request equality!

I cite a further example of either arrogance or incompetance. A meeting of the signatories of the Canadian Turkey Marketing Agency has been called by Council. The meeting appears to be for the benefit of someone's ego, as the calling body itself has placed no items on the agenda. Our agency I believe, has volunteered 3-4 items amounting to housecleaning and could more expediently be cleared away through the mail. The unnecessary expense to provincial governments, provincial boards and the producer agency apparently is of no concern. "What's a million?"

The topic assigned is getting lost in addressing a favorite subject. Bureaucracy is an insipid part of our way of life and somehow it must be stopped and reduced. The continual eroding of real gross production, not only by senseless spending but by reducing private incentive must stop! The holier than thou attitude of so called experts should somehow be replaced by a willingness to compliment our producer endeavours. Then the future of our industry could indeed be bright.

Turkey consumption in Canada appears to be relatively static--around 9 lbs/capita. There are yearly fluctionals of course. For example: From 9.57/capita in 1971 to 8.96 in 1981. It follows that total consumption in Canada at present should be 24 M x 9 or 216,000,000/lbs. Believe it or not this is what roughly has happened. As population has increased, so has total consumption, but not per capita consumption.

It should be relatively simple, considering American imports, to determine the amount of production to adequately meet consumer demands. The fickle consumer and the yearly per capita variance is what causes problems with marketing quotas. A five percent variance causes considerable head scratching.

Collectively, B.C., Alberta, Saskatchewan and Manitoba represent approximately 30% of the total national population. They should logically expect to produce that percentage of approximately 216 M/lbs. I detect unrest over my use of the word logical. What does it mean and is it applied? My thoughts are that self-suffiency is logical. Too much prologue doesn't leave time to pursue that matter. This is commonly called a cop out. The four western province's allocation of the 1982 national total was 30.3%. The method of allocating the percentage among the provinces is another matter.

My topic is the future of the industry in Western Canada. If an industry is to be viable it must produce enough to be viable.

I have mentioned the reasoning behind formation of Marketing Boards and Agencies. I now suggest these boards have been successful in apportioning product that produced a climate conducive to a viable industry. Adequate volume produced at a profit must be the most important concern of this industry. To assess this aspect, a comparison of production costs is necessary to determine if indeed we have justification to produce. The cost component requiring most scrutiny is feed. Consider that feed should cost on the average 50% of selling prices. When feed costs rise over 50% for an extended time the bottom line becomes written in red. Sound suggestion? It works.

Corn in Ontario is quoted farm gate at 5.49¢/lb. whereas #3 Red Spring wheat is quoted in Alberta 5.8 cents/lb. on same basis. A rough calculation indicates an advantage to Ontario of .3 to .4 cents/lb. Without going into ration calculation but assuming a conversion rate of 3.2 their cost advantage could be approximately 1.3 cents/lb. The concentrate portion of a ration does not cover all feed costs. It is surprising how small an advantage the cost of the other feed components really give Ontario. Soybean meal for instance is within 10-15 dollars/tonne. Wheat prices mentioned are a reflection of a long supply of corn in the United States. The livestock industry in Western Canada enjoys relatively good times when the Western grain producer does not. Crow Rate ammendments should correct for some segments of production in Western Canada what has previously given the east a definite advantage. An advantage which necessitated a drain of tax dollars contributed to in a disproportionate measure by the West.

Cost components other than feed are relatively equal. The west has advantages in some and disadvantages in others. Of course energy advantage in the West was quickly recognized and expediently removed.

These statements appear to refute the findings of our Cost of Production Formula. There has never been complete agreement as to the accuracy of that document. Neither has there been agreement as to its necessity. It is another example of producers forced to spend dollars to satisfy other parties' demands. In this case in the neighbourhood of $200,000. Be that as it may, recent updated cost components will indicate a dramatic decrease in the disparity indicated vis-a-vis East and West.

Reverse-protein for pullets - A new approach

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Of all the factors affecting profitability in the laying house, none are more important than the health and condition of the pullet at point of lay. Environment, management system, health and nutrition are interrelated factors that are largely responsible for pullet condition with any genetic line.

The nutritional requirements of the growing pullet are not well defined. This is due in part to the fact that goals have not been clearly defined. It is generally agreed that laying performance is the ultimate standard, thus, within the growing period, it is necessary to define guidelines that will ultimately influence laying performance. For this reason, such factors as mature body weight, status of sexual maturity, uniformity of body weight, and state of feathering are most often considered when evaluating a feeding program.

The traditional way

Although the amino acid balance of diets has improved in recent years, there have been few changes in either the recommended nutrient requirements of the pullet or in the feeding systems. With the advent of complete diets, rearing programs were arbitrarily divided into a "starter" period (0 to 6 or 8 weeks), and a subsequent "grower" or "rearer" period. Relatively high protein starter diets, used to ensure that chicks had a good start in life, were necessarily followed by grower diets containing less protein in order to reduce growth and delay sexual maturity so that the problems of small egg size and the physical disorders of the reproductive tract associated with early-maturing pullets could be avoided.

With this traditional approach, a typical growth curve is as shown in Figure 1. Rapid early growth is associated with high protein and high nutrient density starter diets, as illustrated by growth line A. Change in diet, with reduced nutrient content (section B of the growth line), is necessary to avoid exceeding the breeder's recommended target weight at point of lay (POL). Rapid early growth and subsequent nutrient restriction can both result in stress to the bird. The ideal situation is that depicted by growth line C, where a consistent rate of growth occurs from hatching until point of lay. This situation has not yet been achieved with conventional feeding systems.

Testing natural instincts

On the evolutionary scale, in order to survive, all species of animals acquired an innate ability to select feed from an array of natural ingredients. The fact that the chicken is able to fend for itself was clearly demonstrated in the old system of farmyard management. Today birds are not offered a dietary choice since it is considered that their exact nutrient requirements are known and, above all, complete diets lend themselves to automated feeding systems.

In an attempt to define the nutrient requirements of the growing pullet, tests were conducted to study the natural instincts of the bird in selecting various nutrients. Energy and protein were chosen since they make up the major cost of any poultry diet. For the purposes of the study, growing pullets were allowed a choice of soybean meal (protein) or ground corn (energy), with each being balanced for minerals, vitamins and several important amino acids. These diets were presented to the birds in two separate feeders.

The pullets which were offered this choice grew at a much slower rate than control birds in a conventional feeding program. At 20 weeks, which is the normal age of sexual maturity, the control birds were 200 g heavier than the breeder's recommended target weight, while the test birds were at target weight, their rate of growth having been constant, as depicted by the idealized situation illustrated by growth line C in Figure 1.

The choice of the chicks

Another interesting feature was the pattern of nutrient intake of the test birds, i.e. the amount of corn compared to the amount of soybean meal consumed at any one stage of growth. As the nutrient content of these ingredients was known, it was possible to establish that the pullets consumed very little protein up to about 11 weeks of age. Their preference to this age was corn. After this

Table 1.
Reverse protein feeding

	Reverse protein			Conventional		
	0-12 wk	12-16 wk	16-19 wk	0-8 wk	8-12 wk	12-19 wk
Crude protein (%)	12	16	19	18	15	13
Metabolizable energy (kcal/kg)	3080	2970	2970	3049	2990	2950

age, however, the pullets consumed increasing quantities of protein (soybean meal).

Assessment of the composition of the diet consumed (by calculation of energy and protein intakes) indicated a marked deviation from what is considered to be a normal growing program. From 0 to 11 weeks, the equivalent was an 11 percent crude protein diet, while from 11 to 14 weeks and 14 to 19 weeks, 17 percent and 19 percent crude protein diets respectively were consumed. This apparently erratic intake of protein is a complete reversal of current industry practice.

Why the dichotomy?

A consideration of the physiological changes occurring in the developing pullet may help to explain this situation. It has long been recognized that up to approximately 14 weeks of age, the growing pullet requires protein only for feather development and a relatively slow, genetically predetermined rate of muscle deposition. At about 14 weeks the initial development of the ovaries and their subsequent ovum occur, together with a fairly rapid increase in the growth of the oviduct. It is considered likely that this activity initiates an increased appetite for protein. If this theory is correct, it would appear that the traditional system for feeding pullets is "back-to-front" since, at about 14 weeks of age, low-protein rather than high-protein diets are usually recommended. Conventional, restricted feeding programs at this age impose further limits on protein intake. The tests suggested that birds fed according to the free-choice program may reach the laying house with a more physically mature body structure, and hence be better suited to the rigors of a long laying cycle.

New feeding program developed

To test the theory of increased protein needs with advancement of pullet age, a new feeding program was developed. In deference to the protein specifications, this program has been termed "reverse-protein" feeding (Table 1).

These single compound diets were tested with a commercial hybrid pullet. When offered the reverse-protein diets, birds grew at a slower rate than those reared on conventional diets. At point of lay the test birds were at the breeder's recommended weight, while the control birds were 200 g overweight. The new feeding program achieved control of body weight without recourse to restricted feeding. In addition, there was uniformity of pullet weight, an important consideration, and a factor often adversely affected by manual feed restriction.

During the early stages of growth, it was observed that birds which were fed the initial low protein diet of the step-up protein series were not as well feathered as were control birds; feathering was adequate, but a little rough. As the higher protein diets in the series were introduced, feather appearance improved and there were no visible differences at point of lay.

One of the disadvantages noted in the past by poultry producers using low-protein starter diets was inadequate early feathering. This necessitated higher brooder temperatures for a prolonged time period, and any saving in feed cost was offset by higher fuel costs. Feathering was not retarded as such with the test feeding program due, it is believed, to maintenance of an adequate amino acid balance in the low-protein starter diets.

The economics of the new system

Although it might appear that the reverse-protein program would be expensive, since high-protein diets are fed when the birds are consuming the greatest quantities of feed, calculations showed that by 20 weeks of age, each bird had consumed approximately 100 g protein and 2000 kcal ME less than did the control fed birds. At the time of writing, this would mean a saving in feed costs of $200 per thousand birds.

It was originally stated that the ultimate goal of a pullet rearing program is performance in the laying house. To test this aspect of the new program, birds brought to point of lay on the reverse-protein diet were transferred to individual laying cages at 20 weeks of age and their performance was monitored during a 40 week laying cycle. No differences in performance were observed in the laying house, with the exception that egg size was approximately 1 1/2 percent smaller

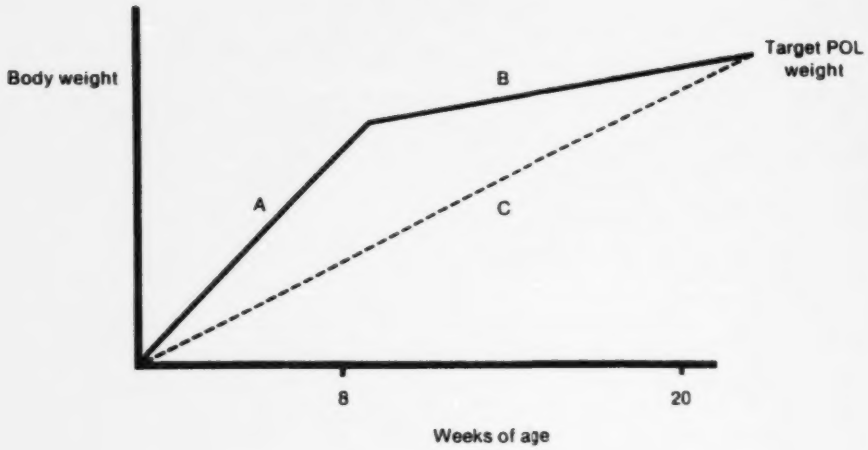

Figure 1 Growth curves

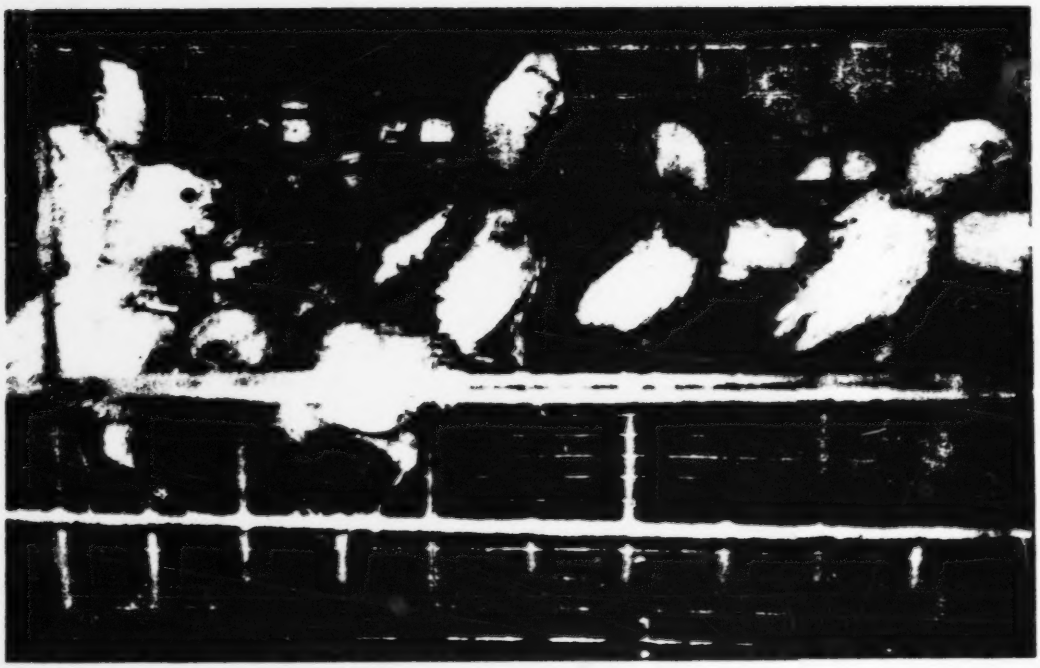

Fig. 2
Feathering of young pullets fed the reverse-protein diets is a little rough, but by no means unacceptable. Birds depicted are about 3 weeks old.

than average for birds of the type being tested. The reduced egg size (59 g versus an average 60 g for the hybrid) would not have meant reduced income because these birds lay larger eggs than many other types. A similar size reduction, however, could be a problem in cases where inherent egg size is smaller.

Future research

Although the reverse-protein system seems ideally suited for growing replacement pullets, research effort will continue to examine the feasibility of simplifying the system to the extent that a single diet from hatching to point of lay may be formulated. Attempts will be made to induce earlier sexual maturity in the birds. Cost reduction is another important factor which will be investigated. Success in any of these areas could confirm the reverse-protein feeding system as a valuable addition to the production know-how of Ontario's egg industry.

TROUBLE SHOOTING IN THE EGG LAYING HOUSE

by DR. PETER HUNTON, ONTARIO EGG PRODUCERS' MARKETING BOARD

(Presented at the 32nd Annual Alberta Poultry Industry Conference, Lethbridge, Alberta - February 21 - 23, 1983)

Introduction

For someone to indulge in trouble shooting, he must first of all know that there is trouble to find. This imposes an obligation on egg producers to keep adequate records. Only when such records are available can the existance of trouble be clearly identified.

Once we can perceive that there is a problem, it is often not too hard to find the solution. However, as our industry develops and advances, I feel that there is a more insidious type of trouble to be found. This requires a great deal more care in maintaining records to identify it, and is often much more difficult to correct. So I can see that really there are two kinds of trouble; "disaster trouble" which hits you in the eye, and "invisible trouble" which may be stealing you blind for a long period of time before its detection.

Disaster Trouble

Even in 1983, we can guarantee that a few of these problems will arise:

- The wrong feed delivered to the right chickens, e.g. pullet ration with no calcium, for laying hens.
- Water off for 24 hours in one row of cages.
- Power-out in brooder barns (cold stress)
- Power-out in layer barns (suffocation and/or heat stress).
- Freeze-ups.
- Incorrect medication (the right material at the wrong time).

Disaster Trouble-continued

- Infectious disease outbreak.
- Etc., etc., etc.

There are some common features of these disasters. They mostly relate to and result to from human error, either doing something wrong or failing to check that something was right. They can all be prevented, or their effects minimized, by anticipation, circumvention, or quick reaction at the time.

Really adequate reaction to these situations before they become disasters depends again upon good records of feed and water consumption and of egg production. In addition, a good functional alarm system will always help to minimize the consequences of things like power-outs and freeze ups.

These disasters, however, are perhaps the easier of the two types of trouble to go shooting.

Invisible Trouble

Maybe you don't know there is trouble in your barn. Many things can shave a thin slice off the top of your income or add one to your costs, without ringing alarm bells.

However, at current prices (average 80¢/dozen net) a 1% loss from a 10,000 size flock, over a full year, amounts to $1,760/year or $33.85/week. Not a fortune, but how many of you can honestly say you are achieving 100% of potential? And at 5% under, you are into the big time losing money - $9,000/year approximately, or $170.00/week, going out the window as lost income, and nothing saved to show for it.

Two years ago, I showed our producer annual meeting how much money they might waste by overfeeding protein. For the example

10,000 size flock, nearly $14.00 per day could be wasted, or $2,520.00 in the six winter months when such overfeeding frequently occurs.

So let's go looking for trouble, even if you do not believe there is any. It won't take long to prove you right or to find something to work at.

I saw a sign in a hen barn last year that says it all "We look for FLAWS in this operation".

F - Feed

L - Light

A - Air

W - Water

S - Sanitation

Feed

There are basically three attributes of feed which we should examine. These are quality, quantity and delivery.

Most poultry producers specify their feed on the basis of crude protein value. While there are some who would prefer to formulate and feed by individual amino acids, many still use the traditional crude protein as the sole specified attribute of feed quality, and there is much to be said for its simplicity. However, many flocks that I have seen continue to feed high protein, say 17% or 18%, long after requirements of the flock have fallen, and their intake of feed has increased. Thus, a great deal of expensive nutrients can be unnecessarily wasted. For example, let us look at our theoretical 10,000 size flock in the month of February. We all know that at this time, average barn temperatures may stray into the 50 - 60°F range from time to time and overall may be hard

to hold in the 65 - 70°F range which is most desirable. Under these circumstances, feed intake of a healthy layer flock can often rise to 24, 25 or even 26 lbs./100/day. I am going to take you on a metric excursion now because it makes my illustration that much simpler. So lets say that same flock can eat between 110 - 118 grams/bird/day. If you are using a 17% or 18% crude protein ration, this will mean that the hens are receiving between 19 g and 22 g of protein per day. According to the management guides for two of Canada's most popular layers, the maximum daily protein intake they would ever require is 19 grams. And this is for a period of perhaps 12 weeks, when production levels exceed 90%/hen-day. This is during the time that the hens are peaking, still growing and increasing their egg size rapidly. At that time, it's sometimes quite hard to persuade them to eat sufficient protein. But once they are 40 or 50 weeks old, production may have fallen to the 80% range, body growth and egg size increase are no longer required, and 19 grams of protein is simply too much. In fact, at 70 weeks of age, these breeders recommend only 16 - 17 g of protein each day. Let's take a look at some figures to show what this means to your bottom line. To develop these figures I made some fairly basic assumptions, and I would like you to take these results as illustrations rather than as absolute truth! For example, it is unlikely that any flock remains on the same feed intake from 20 weeks to marketing. Nevertheless, we can conclude that the use of a single feed throughout the laying cycle can cause considerable waste with high-consuming flocks, and may be inadequate to support maximum production in those consuming lower amounts. Throughout, we are assuming that the output would

be the same, a very large assumption.

As well as the protein levels in feeds, you must be confident that the choice of ingredients, and the physical form of the feed are suitable to the flock under your control. Feed companies have to make a living too, but there are some quality requirements which must be met. The use of low grade cereals, opportunity ingredients etc. are fine provided that they are closely controlled and supervised by competent nutritionists.

Another factor relating to the quality of feed is its physical form. Many poultry producers use a pelleted or crumbled feed, largely because this happens to be easier for the feed mill to handle. It also enables them to streamline their manufacturing process, perhaps saving a few dollars in some cases. However, it also produces a product of which chickens will often consume excesses, simply because it is easier to consume. All of the research in this area shows that mash feeding is beneficial to layers. However, both with mash and pellets or crumbles we need to be certain that palatability is considered. The provision of pellets or crumbles with a large quantity of fines is not satisfactory, because the fines may contain a different mix of ingredients from the pellet or crumble. Similarly, the use of finely ground ingredients in a mash feed will also lower palatability, and encourage hens to pick over the feed rather than consuming it uniformly. However, excellent samples of both mash and pellets or crumbles have been seen. It is something, however, that the alert poultryman should always observe.

The quantity of feed which a flock consumes has already been alluded to. But how many of you can honestly say that you have a

good measurement of the amount of feed consumed by your hens last week? or the week before? Or the same week last year? In my opinion this is the greatest single shortcoming on many of the farms which I visit. In order to keep strict control on flock performance and economics, it is only common sense to be aware of the intake of the largest single economic input; feed. Because we feed ad libitum, this does not mean that we should not be vitally interested in the daily and weekly consumption which the hens volunteer. At the very least, feed consumption should be calculated every time a load of feed is delivered. Some of our large producers who do not have feed measuring equipment use an inventory system; an inventory is taken at the same time each week, enabling calculation, with very little error, of feed consumption during the previous week. Another system is to wire an ordinary clock to the auger system where this is activated by demand from the feeding system. You have to be careful that it does not continue to operate if the auger is empty! A commercial, digital clock system is also available for this purpose. The best system is to use a bin scale, which can be read at the same time each day and will give accurate daily assessments of feed quantity.

The third aspect of feed which is important is the method of delivery to the birds. We have a wide variety of delivery systems; feed carts, chains, augers, hoppers, etc. All have the same goal; even distribution of the feed to each bird in the house. Similarly, we do not want the system to get overloaded so that feed builds up in the trough, a potential site for the development of moulds, etc. I do not have a particularly favourite system. I am a great advocate of the old fashioned chain feeder, but sometimes in very long houses, and where it moves only slowly, this system can lead to

problems of picking over or feed separation. However, such problems are not universal. You should be very sure that the feed analysis, appearance and consistency is the same when the feed arrives back at the hopper or bin as it was when it first entered the feeding system. Frequently, one encounters situations where some birds are over fed, and others on a restricted regime. If this is a feature of equipment, it is probable that the same birds experience the same thing for prolonged periods. We cannot expect the performance of all these birds to be equal, and it surely represents a major opportunity for loss.

Light

No one needs to be told that hens need light in order to perform to their maximum potential. However, there are many variations on the theme of lighting, and I do not propose to cover all of them by any means.

You are probably all aware of the rule that says: "Growing pullets should never experience an increase of daylength and laying birds, never experience a decrease in daylength". Note that we are talking here about daylength, the number of hours during which the hens are exposed to light, either natural or artificial. One of the problems which I see is that many of our barns are using, unwittingly, a combination of natural and artificial light. In other words, artificial light is provided by electric lamps, and natural daylight enters through air intakes, fan shafts. Not all the chickens may respond to the same daylength; those near the natural daylight leakage points may respond to natural changes in daylength, while those further from these points will respond to the artificial lighting programme imposed. For those of you engaged in

rearing pullets, I would strongly advocate the use of light traps so that the lighting programme you impose will be the one to which the birds respond. We saw two examples in Ontario last year, in which birds were moved from pullet facilities with a high degree of light leakage into relatively dark layer barns. The pullets were moved in July, when natural daylength was at approximately 16 hours. The artificial daylength imposed had been 10 hours. The birds were then placed in a layer barn and given an "increase" in daylength to 11 or 12 hours. But some of them thought that they were being cut back from 16 to 12 hours, and so went into a moult and did not commence egg production until the lighting programme was altered.

Another area in the general field of lighting is that of light intensity. In general, producers have tended to lower the light intensity in layer barns in recent years. This has been done with a combination of lower lamp wattages and the installation of solid state dimmers. Both these practices have the advantage of saving in electrical charges. In many barns, however, we still find light intensities exceeding 1 foot candle and, in combination with some other pre-disposing factors, this can often lead to higher-than expected mortality, mainly due to pick-outs. On the other hand, we have seen barns where the light intensity at bird level was less that 0.1 ft. candles, and birds performing excellently. We do not yet know enough about these low light intensity programmes to advocate them universally. Where people grow their own birds and use low intensities throughout, there is no problem. However, one should not reduce the light intensity too dramatically to birds already in production, or at the beginning of their laying cycle. We will learn more about this problem as time goes on.

Air

Most producers know that the provision of fresh air is an essential for a successful egg production unit. The ventilation systems in our poultry houses perform many functions, among them house temperature maintenance, removal of excess moisture, carbon dioxide, ammonia and other potentially toxic gases. What may often be lost among these requirements is the provision of fresh air to each and every bird in the building. At no time is this of greater importance than during the winter, when the number of air changes in a barn is minimal. But if temperature maintenance is given total priority over moisture and gas removal, we can encounter a variety of unwanted problems, ranging from mild respiratory disease to ammonia blindness and poisoning. In older barns, where air intakes are manually controlled, there is a temptation to nail these shut for the cold winter months. There is an assumption that air will find its way in the barn somehow, and that this is adequate. But in fact, the air will find its way in through relatively small spaces and its distribution to all of the birds in the barn becomes most unlikely. Furthermore, if the negative presssure is too high, we may create massive drafts for some birds, and stale air pockets for others. Although it is difficult to accomplish, try and maintain a planned system of air intakes in the winter as well as in the summer. The modern systems which create the so-called "jet-stream" at the air inlets are excellent because they allow cold incoming air to mix with warm inside air before reaching the birds.

Water

Water is the nutrient most taken for granted in almost all

forms of agriculture. Most of the time, we can forget about it in the certainty that things will be okay. However, on the few occasions when things go wrong, it becomes very obvious how important water supply is to our laying birds. I am strongly in favour of keeping good records of water consumption, the same as feed consumption. In large units, there should be a separate water meter for each row of cages. It won't take an expert to see if the water supply fails for the whole unit. But it probably would surprise you to know how many individual rows of cages went without water for 24 or 48 hours before someone noticed that the egg production seemed to be failing.

Not only the quantity, but also the quality of the water supply should be known and monitored routinely. Although bacterial contamination is comparatively rare, it does occur. One of our producers found that a liquid manure system had somehow contaminated his well and he was doing a fine job of recycling fecal coliforms. In this case, the only solution was to cap the well and drill another. If bacterial contamination is at a low level, it can usually be controlled by chlorination, and, occasionally, by ultra violet treatment. Both these systems can make contaminated water perfectly safe for poultry and, indeed, human consumption.

Many water samples from rural areas contain other chemicals which are not necessarily desirable for poultry production. Most are harmless; all are difficult to remove. Probably the commonest chemical in well water is calcium carbonate, which imparts the hardness to well water. While of no harm in itself, hardness often tends to build up in water lines and watering appliances, eventually

causing valves to leak and pipes to become restricted. Various chemical treatments are available to prevent this. One which you should not use is the domestic water softener. This replaces the calcium in the water with sodium, and will quite likely upset the electrolyte balance in the hens. If hardness is a problem, then the best solution is to treat the water with one of the commercial polyphosphate preparations. Chlorination , beside its bactericidal effects, also can react chemically with iron and hydrogen sulphide in the water to make these two contaminants much less of a nuisance. The polyphosphates have similar effects. My message is "have your well water samples checked periodically for bacteria and also for chemical content".

Sanitation

We could spend the balance of the afternoon discussing sanitation, but I am sure that others more qualified than I, could do this more effectively. However, I would like to make two points in regard to sanitation.

Firstly, remember that the egg production unit is a food factory. Consumers rightly demand a high standard of hygiene in the food products they buy. I believe that they have a right to expect this from the egg producer. Eggs produced in a dirty, poorly maintained barn run the risk of offending consumers either by means of bacterial contamination or by odours picked up during storage.

Secondly, any creature, feathered or not, must perform better in a clean, healthy environment, in which potential disease agents are minimized. Poultry vets have coined the term "disease drag" to describe the insidious effect which a gradual build up of

of disease organisms may have on an egg production unit. This is particularly important in multiple age farms or single age sites where the premises are not properly cleaned, disinfected and sanitized both between crops and during the lifetime of each flock.

Conclusion

We have looked briefly at some of the possible effects which variation in feed, light, water, air and sanitation may have on egg producers' profits. We have omitted many important factors; beak trimming, parasites, cage densities, vermin, and more which will occur to you. Most performance variations seen today do not stem from one single overriding factor. They develop because of a complex of interacting, relatively trivial events which combine to produce "so called" problems. The troubleshooter of today requires a magnifying glass, rather than a shotgun.

POSSIBLE DISADVANTAGES OF DWARF BROILER BREEDERS

Rather than presenting only the negative aspects of dwarf broiler breeders, I decided it would be better if I presented the facts as objectively as possible and let each of you make up your own mind. Broiler breeders are housed in many different conditions throughout Canada and they produce broilers for a variety of conditions and markets. There are some sets of conditions where dwarf broilers would have an advantage. Also, there are other sets of conditions where dwarf breeders are not acceptable. In between there are many shades of gray where the dwarf and her progeny may perform satisfactorily but the dwarf breeder may not maximize the combined profit for the breeder and broiler divisions.

The data that I will present comparing dwarf and non-dwarf broiler breeders will be divided into two sections. In the first section I will discuss the differences between dwarf and non-dwarf broiler breeders and their performance in one comparative test. In the second section I will discuss the differences in performance of the broilers produced by dwarf and non-dwarf breeders.

Table 1 shows the data that was recorded for normal and dwarf broiler breeders in a trial conducted by a U. S. integrator. This trial was chosen because data on both breeders and broilers were collected. A person may argue that some of the data does not reflect the performance potential of either the dwarf or non-dwarf breeders or their offspring, but the differences found in this study are similar to the differences measured in other studies. The percent mortality was 0.9% lower in the lay house for the mini-breeders than the normal size breeders. In this test the mature body weight for the mini-broiler breeders was approximately 30% lighter than the regular size breeders at maturity. The reduction in body weight for the dwarf breeder is progressive. In general,

at four weeks of age the dwarf broiler breeders are approximately 15% lighter than the non-dwarf breeders. At 24 weeks of age, the reduction in body weight is approximately 30% and at 40 weeks of age, the dwarf breeders are approximately 35% lighter than the regular female breeder. In this particular test, the hen-day production was 9.6% higher for the dwarf broiler breeders for the entire production and they produced 20 more eggs per hen housed. Other studies have shown that dwarf breeders produce 3-8% more setable eggs. The lifetime hatch was 80.6% for the mini breeders and 83.2% for the non-dwarf breeders. Typically, the hatchability for the dwarf breeders is slightly higher early in the production cycle. Then as the breeders progress in age the hatchability falls to the point where it is lower than the hatchability from normal size breeders. The reduction in hatchability is primarily the result of the males becoming overweight. The combination of the dwarf females being slow eaters and being much smaller than the males, gives males the opportunity to consume feed for a longer period of time and become overweight. Many integrators in the United States have found that in order to improve the hatchability in the late period, it is necessary to spike the flocks with young males between 40 and 50 weeks of age. The feed required to produce a dozen hatching eggs is 3.0 kilograms for the mini breeders and 4.9 kilograms for the regular breeders. In other words, the dwarfs in this study required 30% less feed to produce a dozen hatching eggs. Other studies have shown that dwarfs consume 20% less feed. Relating all of these differences to the cost to produce 1,000 chicks, one finds that the chick costs are 25-30% lower for the dwarf breeder. In this study, the savings was $7.85 per 1,000 chicks produced.

Before a decision is made to place dwarf broiler breeders, other items need to be considered. First, the dwarf has a slower rate of metabolism and as a result the amino acid requirements are higher. One needs to be especially careful to assure that the diets contain enough methionine and cystine to obtain

the performance potential that is bred in. In some cases special diets may be needed in order to maximize performance. Secondly, dwarf broiler breeders are less mobile because of their shorter legs. With their reduction in mobility, one needs to determine if the height of the slats is satisfactory so the dwarfs can easily travel between the litter to the slat area. Also, in some cases the nests may be too high which will result in reduction of total usable nests. In order to avoid potential problems with floor eggs there must be enough usable nests in the lay house.

Table 2 compares the performance of the male broilers from the regular and dwarf female parents that were shown on the previous slide. The male progeny of the dwarf female are heterozygous for the dwarf gene and as a result their growth rate is depressed. The depression is a result of the dwarf gene not being completely recessive. In this particular study, the mortality was 2.3% higher for the progeny from the dwarf breeder female. Other work has indicated that there is probably no difference in livability and the immunological response of dwarfs and non-dwarfs. In fact, recent work at Ohio State (Stephens and Merkur, 1981) has indicated that the dwarf breeders and their progeny may have an advantage in livability. In this study, the male broilers from the regular size breeders were 120 grams heavier than the male progeny of the dwarf female breeders. This means that an additional 2 or 2 1/2 days are required for the progeny of the dwarf breeder to reach the same weight. The unadjusted feed conversion was 4 points higher for the progeny of the dwarf breeder. Part of the difference is a result of the higher mortality of the progeny of the dwarf breeder. When the feed conversion of both groups is adjusted to a common weight of 1588 grams or 3.5 pounds, the feed conversion was expected to be 2.03 for the progeny of the regular breeder versus 2.13 for the progeny of the dwarf breeder. This difference of 10 points reflects differences in the growth rate of the two groups and differences in

mortality. The income over feed cost per 1,000 chicks placed shows an advantage of $85 for the progeny of the normal bird. This difference of $85 reflects the differences in mortality, growth rate and feed conversion between the two groups. However, the calculations did not take into account the difference in the chick cost of the two groups. If the $8 advantage of the dwarf breeders to produce 1,000 chicks is included in the calculations, there is still a $77 difference with the advantage being in favor of the regular size breeder.

Table 3 compares the performance of the female broilers from the regular and dwarf female parents. The mortality is 2% higher for the offspring of the dwarf breeder. The body weight at 55 days of age shows a difference of 53 grams in favor of the normal bird. Since the female broilers do not carry the dwarf gene, the weight difference that is found is a reflection of the difference of growth rate between the dwarf and normal parents. This is important because one-half of the growth potential comes from the female parents and the other one-half comes from the male parents. The feed conversion was 2.07 for the progeny of the normal size breeder versus 2.18 for the progeny of the dwarf breeders. This is a difference of 11 points. The difference in feed conversion may be partly due to differences in body composition as well as growth rate. The Ontario Ministry of Agriculture, Agriculture Canada, and two other organizations (Friars et al, 1979) compared the body composition of seven different parental broiler lines. They found that the dwarf female line had the lowest body weight but the highest percent abdominal fat. Similar findings have been found in research conducted in France and in Australia. When the feed conversion is adjusted to 1588 grams or 3.5 pounds there is a difference of 14 points between the two groups. The income over feed cost was $64 more for the offspring of the regular size parents excluding the difference in chick cost. If the chick cost is included, the difference is $56 in favor of the normal size breeder.

Table 4 presents the data that was collected in a broiler test conducted by H&N in 1981-1982. In this particular test the H&N male was mated to the normal size and dwarf parent females. The body weight of the progeny of the normal parents was 170 grams heavier at 49 days of age. As broilers from dwarf normal parents are taken to heavier weights the difference between the two groups increases. When examining the feed conversion one notices that the progeny from the dwarf female parents had a feed conversion that was 3 points lower than the progeny of the normal parents. However, if the broilers from the dwarf female parents were kept an additional 2 1/2 to 3 days so they would reach 2100 grams in body weight, the feed conversion would have been 2.02-2.04. In this study, the progeny of the normal parents also had a 1.5% higher livability than the progeny of the dwarf parents.

In my mind the future of the dwarf broiler breeders is cloudy. They may play a very important roll if artificial insemination in cages becomes common. Because of their smaller size they will probably adapt to cages better than non-dwarf broiler breeders. Also, keeping the breeders in cages would allow the separation of the breeder males and breeder females. This would allow an individual to feed the males and females differently and effectively control the body weight of both sexes. However, breeding organizations must increase the growth rate of the progeny of the dwarf breeder female. In order to make the dwarf breeder female a viable package, her progeny must be competitive with the progeny of non-dwarf breeders. Obtaining competitive weights with the progeny of dwarf breeders may be difficult because the growth rate of non-dwarf progeny is increasing rapidly with each generation of selection and the slaughter weights are increasing, at least in the United States. At the heavier weights the depressive effect of the dwarf gene on male progeny will be increased.

In closing, my comments about the dwarf broiler breeder can be summarized in the following way.

1. The dwarf breeder females produce more hatching eggs per breeder female. Primarily as a result of the smaller body size, the dwarf breeder produces a dozen hatching eggs on 20-30% less feed than non-dwarf breeders.
2. With the current management practices the hatchability of eggs produced by mini breeders is very good initially but it declines to the point where it is a problem after 40 to 50 weeks of age because the males become overweight. In some locations in the United States, integrators have found that it is necessary to spike or replace the males around 45 weeks of age in order to maintain an acceptable hatchability.
3. In order to maximize egg production of the mini broiler breeder, it may be necessary to formulate special diets in some cases because of her smaller body size and slower rate of metabolism.
4. In some cases, breeder houses may need to be modified because the dwarf is less mobile with her shorter legs.
5. The broilers produced by the dwarf breeder female do not grow as well as the broilers from the non-dwarf breeders. Test results from several sources indicated that the broilers produced by dwarf breeder females may be 70-100 grams lighter than the broilers from non-dwarf breeders when mated to the same males.

Table 1

BREEDER HOUSE PERFORMANCE
U. S. INTEGRATOR TEST

Trait	Breeder Type	
	Normal	Dwarf
% MORTALITY	11.2	10.3
BODY WEIGHT, g.	3357	1996
% PRODUCTION	46.7	56.3
EGGS/HEN-HOUSED	119	139
% HATCH	83.2	80.6
FEED/DOZ. EGGS, kg.	4.9	3.0
COST/1000 CHICKS, $	31.85	24.00

Table 2

PERFORMANCE OF MALE PROGENY
U. S. INTEGRATOR TEST
55 DAYS OF AGE

Trait	Parent Type	
	Normal	Dwarf
% MORTALITY	2.70	5.05
WEIGHT, g.	1653	1530
FEED CONVERSION	2.06	2.10
FEED CONVERSION - ADJ. TO 1588 G.	2.03	2.13
RETURN OVER FEED COST/1000, $	760.92	675.76

Table 3

PERFORMANCE OF FEMALE PROGENY
U. S. INTEGRATOR TEST
55 DAYS OF AGE

Trait	Parent Type	
	Normal	Dwarf
% MORTALITY	1.14	3.12
WEIGHT, g.	1347	1294
FEED CONVERSION	2.07	2.18
FEED CONVERSION - ADJ. TO 1588 G.	2.20	2.34
RETURN OVER FEED COST/1000, $	627.36	563.25

Table 4

BROILER STRAIN COMPARISON
HATCHED DECEMBER 14, 1981
49 DAYS OF AGE

Strain	Body Weight(g)	Feed Conv.	Percent Livability
HN x NORMAL	2100	2.01	98.2
HN x DWARF	1928	1.98	96.7

References

Friars, G. W., C. Y. Lin and H. L. Orr. 1979.
Factors influencing fat deposition in chickens.
Presented to a Workshop on Fat Deposition in
Market Weight Animals. Quebec City, Quebec.

Stephens, J. F. and Phyllis Merkur. 1979.
Dwarf hens could reduce breeder feed, house costs.
Feedstuffs, March 16, 1981, pg. 20.

WHY SHOULD THE "VEDETTE" BREEDER BE CONSIDERED?

FACTOR	COMMENTS
Pullet Grower Fees	15 to 20% less than
Pullet Feed Cost	25 to 30% less than
Pullet Livability	Usually better than
Pullet Medication	Usually less than
Lbs. Feed/Pullet Capitalized	25 to 30% less than
Hatching Egg Producer Fees	Up to 20% less than

WHY SHOULD THE "VEDETTE" BREEDER BE CONSIDERED?

FACTOR	COMMENTS
Hatching Egg Feed Cost	20 to 25% less than
Number of H.E. per Hen Housed	Equal to or better than
% H.E. of Total Eggs	Equal to
Lbs. Feed/Doz. H.E.	20 to 25% less than
Total Lbs. Feed/Doz. H.E. (Life of Flock)	Approx. 25% less than
Hatchability %	Depends on Male Management
Lbs. Breeder Feed/Broiler Chick Hatched	Approx. 25% less than
Double Yolk Eggs	Less than

WHY SHOULD THE "VEDETTE" BREEDER BE CONSIDERED?

FACTOR	COMMENTS
Hen House Livability	Equal to or better than
Broiler Chicks/Hen Housed	Equal to or better than
Salvage Value of Spent Hens	2¢/pound less than
Broiler Livability	Better than
Field Condemnation	Better than
Broiler Feed Conversion	Equal to Average
Broiler Weight for Age	Less than
Heat Tolerance of Breeders	Better than
Heat Tolerance of Broilers	Better than

COST COMPARISON - VEDETTES vs. HEAVY BREEDERS

I. Pullet Capitalization Costs @ 5% Production.

	Heavy Breeder	Vedette
Grower Fees	$ .79	$ .64
Chick Cost	1.62	1.66
Feed Cost	2.47	1.74
Medication Cost	.04	.02
Overhead Cost	.45	.45
	$ 5.37	$ 4.51
Salvage Value (-)	1.13	(-) .72
	$ 4.24	$ 3.79
	÷ 13 Dozen	÷ 13 Dozen
	= $ .33/Dozen depreciation	= $ .29/Dozen depreciation

II. Hatching Egg Cost per Dozen.

	Heavy Breeder	Vedette
Grower Fees	$ .20	$ .18
Depreciation (Pullets)	.33	.29
Feed Cost	.57	.43
Medication Cost	.01	.01
Overhead	.02	.02
	$ 1.13	$ .93
	÷ 84% Hatch	÷ 84% Hatch
	= $ 1.35	= $ 1.11
	÷ 12 Eggs	÷ 12 Eggs
	= $ .1121/Chick	= $ .0923/Chick
	+ .0250 Hatchery Cost	+ .0250 Hatchery Cost
	$ .1371 Total/Chick placed	$ .1173 Total/Chick placed
	÷ 95% Livability	÷ 96% Livability
	= $ .1443 / Chick Processed	= $ .1222 / Chick Processed
	÷ 3.90 lbs. Live weight	÷ 3.90 lbs. Live weight
	= $ .0370/Live lb. Processed	= $ .0313/Live lb. Processed

$ .0370 /Live lb. Broiler Processed - Heavy Hen
.0313 /Live lb. Broiler Processed - Vedette Hen
$ .0057 Savings /Live lb. Broiler Processed

Broiler Feed Cost - @ $ 165 / Ton = $ .0825 per pound of Broiler feed or $. 000825 per 1/100 pound of Broiler feed or better known as 1 point of feed conversion.

THE SAVINGS IN THE BREEDER AREA IS THEN EQUIVALENT TO :
$ .0057 ÷ $ .000825 = 6.91 POINTS OF BROILER FEED CONVERSION.

III. Broiler Cost per Live Pound Processed.

	HEAVY BREEDER BROILERS	VEDETTE BROILERS
Grower Fees	$ .0300	$ .0300
Feed Cost	.1691	.1691
Chick Cost	.0370	.0313
Medication	.0008	.0008
Overhead	.0015	.0015
	$ .2384	$ .2327

Difference = $ .2384
.2327
$ .0057 / per live pound processed.

	VEDETTE BREEDER	HEAVY BREEDER
TOTAL EGGS	168.98	156.37
HATCHING EGGS	166.74	153.58
% HATCH	83.50	٤?.10
CHICKS PER HEN HOUSED	139.23	126.09
LBS. FEED/PULLET CAPITALIZED	25.08	29.64
TOTAL FEED/DOZ. LIFE OF FLOCK	7.55	9.93
LBS. FEED/DOZ. DURING LAY	5.74	7.62
LBS. BREEDER FEED/BROILER CHICK	.75	1.02
% PRODUCTION LIFE OF FLOCK	65.4	60.5
% CAPITALIZATION	93.55	94.22
% HEN HOUSE MORTALITY	8.78	6.48
LBS. BREEDER WEIGHT WHEN SOLD	5.42	7.46
% HATCHING EGGS	98.69	98.21
DAYS OF LAY	272	271
DATE CAPITALIZED	6/12/81	6/11/81

MIXED (ORIGINALLY ROSS) x VEDETTE

HATCH DATE	6/9/81	6/12/81
DATE CAPITALIZED	12/1/81	12/4/81
% CAPITALIZED	97.2	95.7
LBS. FEED PER PULLET CAPITALIZED	22.9	22.07
DAYS OF LAY	252	255
TOTAL EGGS PER PULLET CAPITALIZED	169.90	162.5
H.E. PER PULLET CAPITALIZED	165.15	160.9
% HATCHABILITY	84.0	81.3
% HATCHING EGGS	97.3	99.0
CHICKS PER PULLET CAPITALIZED	138.7	130.8
% PRODUCTION LIFE OF FLOCK	64.2	64.0
% HEN HOUSE MORTALITY	---	---
TOTAL FEED/DOZ. LIFE OF FLOCK	7.09	7.25
LBS. FEED/DOZ. DURING LAY	5.43	5.60
LBS. FEED/BROILER CHICK	.61	.67

1982

MAY - JUNE - JULY

	P-H-V-R x VED	PET x HUB	PET x AA
AGE	51.3	51.2	49.7
WEIGHT	3.98	4.14	3.96
FEED CONVERSION	2.07	2.08	2.07
FIELD CONDEMNATION	.48	.55	.48
LIVABILITY	97.54	96.43	97.02
AVERAGE WEIGHT GAIN PER DAY	7.76	8.08	7.97
CALORIES/LB. MEAT	2982	3001	2979
FORMULA COST	24.39	24.42	24.44

The following are results from a test conducted by an integrator in the Southeast.

BREED	AGE	WEIGHT	FEED CONV.	NUMBER
Shaver x Shaver Mini	48 days	3.581	1.891	20,292
Cobb x Hubbard Mini	48 days	3.585	1.870	20,292
Cobb x Vedette	48 days	3.573	1.861	20,292
Peterson x A.A.	48 days	3.64	1.939	20,292

The following are boiler results from a major integrator in the Southeast.

BREED	NUMBER	AGE	WEIGHT	FEED CONV.	WEEK ENDING
Pet x Vedette	55,000 +	48	3.80	1.92	11/6/82
Complex Average	1,000,000 +	50	4.20	1.99	11/6/82
Pet x Vedette	53,000 +	49	3.90	1.93	10/23/82
Complex Average	1,000,000 +	50	4.12	1.99	10/23/82

NOTE : The complex average is composed of the following crosses : Peterson x Hubbard, Peterson x AA, and AA x AA.

These broiler results from a major integrator in the SOUTHEAST.

BREED	AGE	NUMBER	WEIGHT	FEED CONV.	CONDEMN.
Vedette Crosses	53	41,900	4.17	1.97	.43
COMPLEX AVERAGE	52	636,214	4.06	2.00	.54
Week Ending 8/21/82					
**********					
Vedette Cross	53	30,000	4.32	1.89	.89
Vedette Cross	53	41,000	3.97	1.98	.43
Vedette Cross	51	63,100	3.98	1.97	.56
COMPLEX AVERAGE	52.2	632,800	4.13	1.98	.69
Week Ending 8/28/82					

BROILER FIELD RESULTS

FROM A MAJOR INTEGRATOR IN THE SOUTHWEST

BREED	# STARTED	AVG. WT.	F.C.	COND.	LIV.	AGE
VEDETTE x ROSS	700,000+	3.84	2.03	.60%	97.2%	47
AA x PETERSON	1,000,000+	3.77	2.03	.71%	96.1%	47
AA x ROSS	2,000,000+	3.81	2.04	.95%	96.7%	47

BACK UP INFORMATION TO EXPLAIN THE COST COMPARISON BETWEEN THE HEAVY HENS & THE VEDETTE HENS

I. Pullet Capitalization Costs - 5% production is used for the time of Capitalization instead of a given week because the Vedette tends to mature early - normally two weeks.

A.) Grower Fees - Savings depends on whether the company pays the pullet grower on square footage or per bird per week. No savings would be realized if pay is on a per bird basis.

Approximately 25% savings would be realized if pay is on a square footage basis.

Heavy Breeder

18 weeks x (1.80¢/sq. ft./week x 20,000 sq. ft.) = $ 6480
6 weeks x (0.75¢/sq. ft./week x 22,000 sq. ft.) = 990
$ 7470 TOTAL

20,000 ÷ 1.75 sq. ft. = 11428 pullets started x 95% livability = 10857 pullets capitalized.

$ 7470 ÷ 10857 pullets cap. = $.69 per pullet capitalized for pullet grower fees.
Plus 15% extra for cockerel grower fees. $ .69
+ .10
$ .79 TOTAL

Vedette

18 weeks x (1.80¢/sq. ft./week x 20,000 sq. ft.) = $ 6480
6 weeks x (0.75¢/sq. ft./week x 22,000 sq. ft.) = 990
$ 7470 TOTAL

11428 x 125% = 14285 started x 96% livability = 13714 capitalized.

$ 7470 ÷ 13714 = $ .54/pullet capitalized for pullet grower fees, plus 15% extra for cockerel grower fees. On same basis as heavy breeder cockerels. $ .54
+ .10
$ .64 TOTAL

B.) Chick Cost - The day old chick cost of the Vedette is approximately 5¢ higher than the heavy pullet.

Heavy Breeder

$1.20 net day old cost ÷ 95% livability = $1.26 day old pullet cost per pullet capitalized. Starting 13% cockerels at day old at $2.35/cockerel = $.31 day old cockerel cost per pullet started ÷ 85% livability = $.36 cockerel cost per pullet capitalized. $1.26 pullet cost plus $.36 cockerel cost = $1.62 total per pullet capitalized.

Vedette

$1.25 net day old cost ÷ 96% livability = $1.30 day old pullet cost per pullet capitalized. Starting 13% cockerels at day old at $2.35/cockerel = $.31 day old cockerel cost per pullet started ÷ 85% livability = $.36 cockerel cost per pullet capitalized. $1.30 pullet cost plus $.36 cockerel cost = $1.66 total per pullet capitalized.

C.) Feed Cost - This is an example based on the same calorie feed for each pullet. If pounds per pullet capitalized is better or worse than 34 on the Regular Pullet in a given Company, the pounds per pullet capitalized on the Vedette will be proportionately better or worse. (Includes male feed to capitalization).

Heavy Breeder

$.0725/pound feed x 34 pounds/pullet capitalized = $2.47

Vedette

$.0725/pound feed x 24 pounds/pullet capitalized = $1.74

D.) Medication Cost - Experience shows less than one half the expense for medication.

E.) Overhead Cost - Per pullet assumed to be the same.

F.) Salvage Value - The average heavy hen price in Georgia for 1980 was 15.76¢ per pound. Experience shows an average of $.02 per lb. less for the small breeder than for the heavy breeder.

Heavy Breeder	Vedette
$ .15/Pound	$ .13/Pound
7.5 pound hen	5.5 pound hen
$ 1.13	$ .72

II. Hatching Egg Cost per Dozen

A.) Grower Fees - The company would be able to increase the total grower payment by 20% because of being able to house approximately 20% more Vedettes in the same house as the heavy breeder if primary breeder's recommendations are followed on both, or decrease their cost per dozen by 20% or a combination of both. Shown in this comparison, one half the savings is given to the grower and the other one half to the company.

B.) Depreciation (Pullets & Cockerels) - see above cost breakdowns

C.) Feed cost per dozen - This comparison is using the same calorie feed on both hens. Better or worse conversions on the heavy hen should be proportionately adjusted with the Vedette.

Heavy Breeder

7.50 pounds feed/Dozen x $.076 per pound = $.57/Dozen feed cost.

Vedette

5.60 pounds feed/Dozen x $.076 per pound = $.43/Dozen feed cost.

D.) Medication Cost - Assumed to be the same.

E.) Overhead Cost - Assumed to be the same.

III. Other

A.) Hatchability is the same.

B.) Broiler livability as shown here includes field condemnation & DOA's. The Vedette's average 1% better in this category because of less field condemnations & better livability than broilers from heavy breeders.

IV. Broilers

A.) Cost would be the same per pound since payment is based on a per pound basis.

B.) Using $165/ton feed ($.0825 per pound) & a 2.05 feed conversion. Field data show the conversion to be equal as the same weight broiler.

C.) Chick cost here is from calculations on previous pages.

D.) Medication costs assumed to be the same.

E.) Overhead (servicing & supervision) assumed to be the same.